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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,872	06/25/2003	John W. Marshall	112025-0516	3020

24267 7590 04/09/2007  
CESARI AND MCKENNA, LLP  
88 BLACK FALCON AVENUE  
BOSTON, MA 02210

EXAMINER
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NGUYEN, DUSTIN

ART UNIT	PAPER NUMBER
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2154

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/09/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/603,872	MARSHALL ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Dustin Nguyen	2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 January 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>06/25/03, 01/07/05</u> .                                      | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. Claims 1-33 are presented for examination.

#### ***Allowable Subject Matter***

2. Claims 6, 17, 27 and 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, and overcome the 35 USC 101 rejection below.

#### ***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 5, 6, 16, 17, 26, 27, 32 and 33 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. As per claims 5, 16, 26, and 32 appear to be producing a tangible result which enables any usefulness of having determined if a matching entry is found and if an operation code indicates a delete data operation. Under all other conditions, the final result achieved is a determination which has not been used nor made available for use in the disclosed practical application (what happen if a matching entry is not found and if it does not indicate a delete data operation). As per claims 6, 17, 27, and 33 appear to be producing a tangible result which enables any usefulness of having determined if a

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matching entry is found and if an operation code indicates an insert data operation. Under all other conditions, the final result achieved is a determination which has not been used nor made available for use in the disclosed practical application (what happen if a matching entry is not found and if it does not indicate an insert data operation). As such, no usefulness of having made the determination can be realized.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, 9, 12, 22-25 and 28-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Aggarwal et al. [ US Patent No 6,275,508 ].

6. As per claim 1, Aggarwal discloses the invention as claimed including a method for modifying data transferred from a source to a destination [ i.e. header modifying or manipulation as bytes may be changed from an input to the output FIFOs ] [ Abstract; col 2, lines 25-30; and col 7, lines 57-61 ], the method comprising the steps of:

generating one or more commands wherein each command is associated with an operation to modify the data [ i.e. the instruction set is stored in the Write Control Store (WCS)

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and inserting and deleting bytes ] [ Figure 1; col 4, lines 51-54; col 5, lines 24-38; and col 8, lines 21-25 ];

placing the commands in a data structure [ i.e. various fields of the WCS ] [ Figure 12; and col 10, lines 19-24 ]; and

performing the operations associated with the commands contained in the data structure to modify the data as directed by the commands as the data is transferred from the source to the destination [ i.e. perform header manipulation and adaptation under the guidance of the sequencer unit ] [ col 2, lines 25-28; col 3, lines 29-32; and col 8, lines 21-25 ].

7. As per claim 2, Aggarwal discloses acquiring the data from the source [ i.e. input packet source or FIFO ] [ Figure 1; and col 3, lines 26-29 ].

8. As per claim 3, Aggarwal discloses generating a bit mask associated with the acquired data; and transferring the bit mask and the acquired data to the destination [ i.e. mask-shift operation ] [ Figure 10; and col 7, lines 39-46 ].

9. As per claim 4, Aggarwal discloses wherein the data structure comprises one or more entries wherein each entry is associated with a command and the entry contains information associated with a range of addresses and an operation code that are associated with the command [ i.e. various fields of WCS ] [ Figure 12; and col 10, lines 19-31 ].

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10. As per claim 9, Aggarwal discloses wherein the data structure is a table [ i.e. table database ] [ col 4, lines 24-34 ].

11. As per claim 12, Aggarwal discloses wherein the destination is an output buffer [ i.e. output FIFO's ] [ Figure 1; and col 3, lines 39-42 ].

12. As per claims 22-25, they are rejected for similar reasons as stated above in claims 1-4.

13. As per claims 28-31, they are rejected for similar reasons as stated above in claims 1-4.

***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 5, 26 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aggarwal et al. [ US Patent No 6,275,508 ], in view of Ueno [ US Patent Application No 2002/0009050 ].

16. As per claim 5, Aggarwal does not specifically disclose the step of: searching the data structure for an entry containing information associated with a range of addresses that matches a

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range of addresses associated with the acquired data; if a matching entry is found, determining if an operation code contained in the matching entry indicates a delete data operation; and if so, generating a delete bit mask that represents data that is deleted in the acquired data and transferring the delete bit mask and the acquired data to the destination. Ueno discloses the step of: searching the data structure for an entry containing information associated with a range of addresses that matches a range of addresses associated with the acquired data; if a matching entry is found, determining if an operation code contained in the matching entry indicates a delete data operation; and if so, generating a delete bit mask that represents data that is deleted in the acquired data and transferring the delete bit mask and the acquired data to the destination [ i.e. the label stack deletion or pop operation ] [ Figures 4 and 5; and paragraphs 0028, 0032, 0033 and 0035 ]. It would have been obvious to a person skill in the art at the time the invention was made to combine the teaching of Aggarwal and Ueno because the teaching of Ueno would provide a packet transfer method and apparatus that can relieve the processing load of the apparatus for performing the packet transfer [ Ueno, paragraph 0010 ].

17. As per claims 26 and 32, they are rejected for similar reasons as stated above in claim 5.

18. Claims 7, 8, 10, 11, 13-15, and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aggarwal et al. [ US Patent No 6,275,508 ], in view of Deforche et al. [ US Patent Application No 2005/0232303 ].

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19. As per claim 7, Aggarwal does not specifically disclose wherein each entry contains a length and a source address associated with the command. Deforche discloses wherein each entry contains a length and a source address associated with the command [ i.e. the HAF contain length information as well as layer 2 information ] [ paragraphs 0065 and 0078 ]. It would have been obvious to a person skill in the art at the time the invention was made to combine the teaching of Aggarwal and Deforche because the teaching of Deforche would provide an efficient packet processing element using parallel processing [ paragraphs 0005-0007 ].

20. As per claim 8, Aggarwal does not specifically disclose the step of: searching the data structure for an entry containing information associated with a range of addresses specified by the combination of the length and the source address contained in the entry that matches a range of addresses associated with the acquired data. Deforche discloses the step of: searching the data structure for an entry containing information associated with a range of addresses specified by the combination of the length and the source address contained in the entry that matches a range of addresses associated with the acquired data [ paragraphs 0185 and 0186 ]. It would have been obvious to a person skill in the art at the time the invention was made to combine the teaching of Aggarwal and Deforche because the teaching of Deforche would provide an efficient packet processing element using parallel processing [ paragraphs 0005-0007 ].

21. As per claim 10, Deforche discloses clearing the data structure [ i.e. reset ] [ paragraphs 0135 and 0143 ].



22. As per claim 11, Deforche discloses wherein the source is a context memory [ paragraph 0004 ].
23. As per claim 13, it is rejected for similar reasons as stated above in claims 1 and 11.
24. As per claim 14, it is rejected for similar reasons as stated above in claim 9.
25. As per claim 15, it is rejected for similar reasons as stated above in claim 4.
26. As per claims 18 and 19, they are rejected for similar reasons as stated above in claims 7 and 8.
27. As per claim 20, it is rejected for similar reasons as stated above in claim 3.
28. As per claim 21, Aggarwal discloses wherein the output buffer comprises: data steering logic configured to use the bit mask to identify valid data contained in the transferred data; a working register coupled to the data steering logic and configured to hold the valid data transferred from the data steering logic; and an output queue coupled to the working register and configured to hold the valid data transferred from the working register [ i.e. shift and align for output ] [ Figure 10; col 7, lines 39-46; and col 9, lines 12-22 ].

29. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aggarwal et al. [ US Patent No 6,275,508 ], in view of Deforche et al. [ US Patent Application No 2005/0232303 ], and further in view of Ueno [ US Patent No 2002/0009050 ].

30. As per claim 16, Aggarwal and Deforche do not specifically disclose search the data structure for an entry containing information associated with a range of addresses that matches a range of addresses associated with the acquired data; if a matching entry is found, determining if an operation code contained in the matching entry indicates a delete data operation; and if so, generating a delete bit mask that represents data that is deleted in the acquired data. Ueno discloses searching the data structure for an entry containing information associated with a range of addresses that matches a range of addresses associated with the acquired data; if a matching entry is found, determining if an operation code contained in the matching entry indicates a delete data operation; and if so, generating a delete bit mask that represents data that is deleted in the acquired data [ Figures 4 and 5; and paragraphs 0028, 0032, 0033 and 0035 ]. It would have been obvious to a person skill in the art at the time the invention was made to combine the teaching of Aggarwal, Deforche and Ueno because the teaching of Ueno would provide a packet transfer method and apparatus that can relieve the processing load of the apparatus for performing the packet transfer [ Ueno, paragraph 0010 ].

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31. A shortened statutory period for response to this action is set to expire **3 (three) months and 0 (zero) days** from the mail date of this letter. Failure to respond within the period for response will result in **ABANDONMENT** of the application (see 35 U.S.C 133, M.P.E.P 710.02, 710.02(b)).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dustin Nguyen whose telephone number is (571) 272-3971. The examiner can normally be reached on flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached at (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dustin Nguyen

Examiner

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